IV. SITE SUMMARIES FOR FACILITIES ON THE NPL (BY STATE)

This section of the Annual Report to Congress provides a detailed description of progress made at each of the 21 U.S. Department of Energy (DOE) facilities currently on the National Priorities List (NPL). The information provided includes each facility's NPL status, background summary information, environmental conditions, and funding information. Each of the applicable Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 120(e)(5) information requirements is also addressed. Discussion of the Hanford - 1100 Area is retained in this section although this portion of the Hanford Site has been deleted from the NPL. The geographic location of these sites is identified in Figure I-1.

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LABORATORY FOR ENERGY-RELATED HEALTH RESEARCH

Davis, Yolo County, California

Office: Oakland Operations Office

Size: 15 acres (0.02 square mile)

NPL Status: Placed on NPL on May 31, 1994.

Mission: The Laboratory for Energy-Related Health Research (LEHR) facility consists of several DOE-owned buildings located on property leased from the University of California, Davis (UCD). LEHR was established in 1958 by the Atomic Energy Commission to conduct research of health effects on dogs exposed to bone-seeking radionuclides. Full-scale experimental use of radioactive materials, including strontium-90 and radium-226, began at the LEHR site in 1960. DOE is considered a potentially responsible party for LEHR.

Overview of Environmental Conditions: The contaminants are primarily strontium-90 and radium-226 in buildings and tanks and organics, radionuclides, and trace metals in soil and groundwater. Tritium has also been detected. Between the 1940s and 1967, approximately 6 acres of the site were independently operated by UCD as a sanitary landfill and low-level radioactive waste disposal area. Routine laboratory and university refuse, including chemical waste, was disposed of at this site.

CERCLA/RCRA Remediation Funding in FY 96: $3,409,000

Progress in Reaching Interagency Agreement

In 1988, DOE terminated the research program and in 1989 signed a Memorandum of Agreement (MOA) with UCD to begin cleanup of the site. This MOA was amended in 1993 to limit DOE involvement in areas that were the University's responsibility to characterization activities only. DOE, Environmental Protection Agency (EPA)
Region IX, and the State of California are currently negotiating a Federal Facility Agreement (FFA) for cleanup of LEHR. The FFA will not be executed until an agreement has been reached between DOE and the University of California delineating each party's responsibility for cleanup. This agreement is expected to be completed in fiscal year (FY) 97. The FFA is also expected to be signed in FY 97.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for environmental restoration at LEHR total $2.6 million of appropriated funding for FY 97 and $4.9 million for FY 98 according to the request in the President's Budget.

Public Comments Regarding Interagency Agreements

An Interagency Agreement (IAG) in the form of an FFA is currently being negotiated and is expected to be completed in FY 97. The neighboring community, special interest groups, local media, and elected officials are concerned about leaking landfills and groundwater contamination from areas of contamination that do not appear to be DOE's responsibility.

Progress in Conducting Remedial Investigations/Feasibility Studies

DOE continues to conduct CERCLA investigations and response actions on soil from landfills and burial trenches. On September 30, 1996, DOE terminated characterization activities in areas for which the University has assumed responsibility as defined in the agreement between DOE and UCD.

Progress in Conducting Remedial Actions

In FY 95, the following activities were accomplished:

- The Imhoff Building, including the ion exchange treatment facility and adjacent laboratory, was demolished;
- The tank trailer was dismantled, compacted, and disposed of; and
- Release surveys and independent verification were completed for the two Animal Hospital Buildings and Specimen Storage Rooms.

In FY 96, the following activities were accomplished:

- Decontamination of the Cobalt-60 Building was completed; and
- Removal of outdoor dog pens was completed.

LAWRENCE LIVERMORE NATIONAL LABORATORY - LIVERMORE SITE

Livermore, Alameda County, California

Office: Oakland Operations Office

Size: 811 acres (1.3 square miles)

NPL Status: Placed on the NPL on July 22, 1987.

Mission: The Lawrence Livermore National Laboratory (LLNL) was established in 1952 to function as a national scientific and technical resource for the nuclear weapons program and other programs of national interest. LLNL performs research, development, and testing associated with the nuclear design aspects of all phases of the nuclear weapon life cycle. The Laboratory, consisting of two noncontiguous parcels (Livermore Site and Site 300), is also involved in the following programs: inertial fusion, magnetic fusion, biomedical and environmental research, isotope separation, and applied energy technology and other research-related activities.

Overview of Environmental Conditions: Contamination of groundwater and soil with tetrachloroethylene, perchloroethylene, and trichloroethylene.

CERCLA/RCRA Remediation Funding in FY 96: $13,399,500

Progress in Reaching Interagency Agreement

DOE entered into an FFA with EPA Region IX and the State of California for cleanup of the LLNL-Livermore Site. This FFA was executed on November 1, 1988 and became effective in February 1989. Significant emphasis was placed on the renegotiation of FFA-enforceable milestone deliverables in FY 95. In June 1994, EPA and the state agencies approved a revised schedule that reprioritized activities to direct the focus on the western and southern perimeters where there is offsite contamination. A treatability study and groundwater facility were added for Trailer 5475 where there are volatile organic compounds and tritium contamination. The Treatment Facility 518 vapor extraction system was also included in the schedule.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for environmental restoration to support the FFA milestones at the LLNL-Livermore Site total $11.7 million of appropriated funding for FY 97 and $11.4 million for FY 98 according to the request in the President's Budget.

Public Comments Regarding Interagency Agreements

No new comments on the FFA were received in FY 96. An IAG in the form of an FFA became effective in 1989; as a result, a technical assistance group is in place. This group continues to support a community working group to review post Record of Decision (ROD) documents and to provide input into the recent renegotiations and priorities of the site remediation efforts.

Progress in Conducting Remedial Investigations/Feasibility Studies

The Draft Final Feasibility Study (FS) was submitted to the state and EPA in December 1990 and the proposed Remedial Action Plan was submitted in October 1991, in preparation for the November 1991 public hearing on the proposed plan for onsite remediation activities. A responsiveness summary for the public comments and final ROD was approved by DOE in June 1992.

Progress in Conducting Remedial Actions

The ROD for the LLNL-Livermore Site was approved by DOE, EPA, and the State of California in June 1992. The ROD called for cleanup of soil and groundwater using seven treatment facilities and 24 initial extraction locations. Subsequent negotiation with the regulators resulted in streamlining operations and reporting requirements, replacing pipelines, repairing facilities with portable treatment facilities, and increasing the total number of wells and treatment facilities. Currently, seven treatment facilities are in operation. Complete hydraulic capture of the western offsite plume has been established. There has been a dramatic decrease in offsite contaminant concentrations. Additionally, a successful demonstration of the Dynamic Underground Stripping Technology was performed at the Gasoline Spill Area, which resulted in the removal of approximately 10,000 gallons of fuel hydrocarbons.

In FY 96, operations began in the Building 518 Vapor Treatment Facility, Portable Treatment Facilities G-1 and F, and the Treatment Facility C North Pipeline began operation.

LAWRENCE LIVERMORE NATIONAL LABORATORY - SITE 300

Tracy, San Joaquin County, California

Office: Oakland Operations Office

Size: 7,000 acres (10.1 square miles)

NPL Status: Placed on the NPL on August 30, 1990.

Mission: The LLNL was established in 1952 to function as a national scientific and technical resource for the nuclear weapons program and other programs of national interest. LLNL performs research, development, and testing associated with the nuclear design aspects of all phases of the nuclear weapon life cycle. The Laboratory consists of two noncontiguous parcels, the Livermore Site and Site 300. Site 300 is used for high explosives testing.

Overview of Environmental Conditions: Contamination of onsite groundwater and soil with tritium and trichloroethylene and high explosive compounds.

CERCLA/RCRA Remediation Funding in FY 96: $12,100,500

Progress in Reaching Interagency Agreement

An integrated (CERCLA/RCRA) FFA was negotiated and signed between DOE, EPA Region IX, the California EPA's Department of Toxic Substance Control, and the Central Valley Regional Water Quality Control Board on June 29, 1992. In February 1994, a revised Appendix A (schedule of deliverables) to the FFA was approved by EPA.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for environmental restoration to support the milestones in the FFA at the LLNL-Site 300 total $10.4 million of appropriated funding for FY 97 and $8.5 million for FY 98 according to the request in the President's Budget.

Public Comments Regarding Interagency Agreements

All stakeholders and interested parties have been involved in the development of the FFA and subsequent revisions.

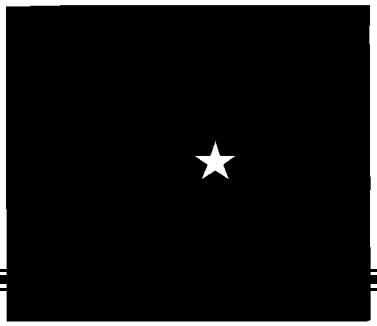
Progress in Conducting Remedial Investigations/Feasibility Studies

Under the terms of the FFA and at the request of the regulatory agencies, the Site 300 Site Wide Remedial Investigation (SWRI) Report was prepared. The final SWRI Report was submitted to the regulators in March 1994. The General Services Area (GSA) Operable Unit (OU) FS was completed in October 1995, the Building 834 OU Proposed Plan (PP) was completed in January 1995, and the Pit 6 OU FS-Engineering Evaluation/Cost Analysis (EE/CA) was completed in November 1994.

DOE, LLNL, and regulatory agency personnel have worked together to "re-engineer" the CERCLA process to expedite cleanup at portions of LLNL-Site 300 that present potential risks to human health and the environment. The areas of highest priority are the GSA, Building 834, and Building 832 Canyon. GSA and Building 834 are going through the standard CERCLA process of FS, PP, Public Meeting, and ROD. At the GSA OU, two interim groundwater treatment facilities continued operation, and a final PP and draft ROD were completed. At the Building 834 OU, an interim groundwater/vapor treatment facility continued operation, and a Title I Design for Surface Water Drainage Project was completed. Building 832 Canyon is in the subsurface investigation phase, and the appropriate CERCLA path will be chosen on completion of the investigation.

Progress in Conducting Remedial Actions

The Interim Groundwater Facilities at the Eastern and Central GSA have continued to operate, and the Interim Soil Vapor Extraction Facility at Building 834 was restarted. At GSA, the offsite plume has been significantly pulled back and offsite contamination has been reduced.



ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

Golden, Jefferson County, Colorado

Office: Rocky Flats Operations Office

Size: 6,550 acres (10.2 square miles)

NPL Status: Placed on the NPL on October 4, 1989.

Mission: The mission of the Rocky Flats Environmental Technology Site (RFETS), formerly the Rocky Flats Plant, is to manage waste and materials, and to clean up and convert the site for beneficial use in a manner that is environmentally safe and socially responsible, physically secure, and cost-effective.

Overview of Environmental Conditions: Onsite contamination of soil, groundwater, and surface water by chemical and radioactive materials used at the facility. Offsite soil contamination also has been identified.

CERCLA/RCRA Remediation Funding in FY 96: $71,039,000

Progress in Reaching Interagency Agreement

On July 19, 1996, DOE, EPA Region VIII, and the Colorado Department of Public Health and Environment (CDPHE) signed the Rocky Flats Cleanup Agreement. This document supersedes the IAG among DOE, EPA Region VIII, and the State of Colorado executed on January 22, 1991 that replaced the July 31, 1986 Resource Conservation and Recovery Act/Comprehensive Environmental Response, Compensation, and Liability Act Compliance Agreement executed by the same parties. The Rocky Flats Cleanup Agreement is a legally binding agreement among DOE, EPA Region VIII, and CDPHE to accomplish the required cleanup of radioactive and other hazardous substances contamination at RFETS in a safe, effective, and efficient manner.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for environmental restoration total $51.7 million of appropriated funding for FY 97 and $53.2 million for FY 98 according to the request in the President's Budget.

Public Comments Regarding Interagency Agreements

Discussions began in FY 93 between DOE and the regulatory agencies regarding negotiation of the new Rocky Flats Cleanup Agreement. The public was kept abreast of this activity, and a preliminary draft of the agreement was provided for informal comment. On March 14, 1996, the draft of the new cleanup agreement was released for public comment. More than 100 individuals and organizations submitted written comments, which were carefully reviewed and considered during the preparation of the final

agreement. Almost 40 people presented oral statements at three public hearings. A responsiveness summary was prepared.

Progress in Conducting Remedial Investigations/Feasibility Studies

Initial site characterization efforts at RFETS began in July 1986 under the RCRA/CERCLA Compliance Agreement and continue under the IAG executed on January 22, 1991. A comprehensive list of all known and suspected hazardous, radioactive, and mixed waste sources at the site has been compiled, including descriptions of all known release information for 178 individual hazardous substance sites. These sites originally were categorized for further environmental investigation and remediation into 16 OUs based on cleanup priorities, waste type, geographic location, and public input. Since that time, characterization has been completed and no-action RODs have been approved by DOE, EPA, and the CDPHE for three operable units (OUs 11, 15, and 16).

In addition, eight of the remaining OUs have been consolidated to form two OUs that benefit from coordinating the regulatory jurisdictional boundaries with the OU consolidation boundaries, thus reducing administrative and process requirements. These consolidated OUs are known as the Industrial Area (former OUs 4, 8, 9, 12, 13, 14, and part of 10) and the Buffer Zone (OU 2 and the remainder of OU 10). Separate RODs will still have to be completed for OUs 1, 3, 5, and 6. The OU 1 ROD was submitted for regulatory approval on September 30, 1996.

The 881 Hillside (OU 1) Proposed Plan was submitted for public comment in May 1996, based upon a remedy selection made by the IAG dispute resolution committee. A final Correction Action Decision/Record of Decision (CAD/ROD) was signed by Rocky Flats Field Office and transmitted to the regulators in September 1996.

Under the new cleanup agreement, no Corrective Measures Study/Feasibility Study documents will be prepared. Instead, documents such as Proposed Action Memoranda or Interim Measures/Interim Remedial Actions (IM/IRA) will be used to describe cleanup plans for one or a group of individual hazardous substance sites. These documents will be subject to public comment before approval.

The final draft and final OU 2 Remedial Investigation (RI) Reports were delivered to the regulatory agencies in May and September 1995, respectively. The OU 2 FS began in FY 95 but has been superseded by the new regulatory approach described above. In lieu of the FS, two proposed action memoranda were initiated in FY 96, with additional proposed action memoranda or IM/IRAs being completed in FY 97 and 98. OU 2 is now part of the Buffer Zone OU.

In OU 3, Offsite Areas, the final RI Report was completed and submitted to the regulators in June 1996. This assessment concludes that the risk from offsite contamination is below regulatory concern, and no remedial action is necessary. A proposed plan was submitted for public comment in August 1996. A no-action CAD/ROD is expected to be approved in FY 97.

OU 4, Solar Evaporation Ponds, is now part of the Industrial Area OU.

The Phase I and Phase II RI field work for OU 5 was combined so that only one RI Report was required, the final of which was delivered to the regulatory agencies in April 1996. Two individual hazardous substance sites from OU 5 were transferred to the Industrial Area OU, and a no-action ROD is being considered. A proposed plan is expected to be submitted in FY 97.

RI field work for OU 6 has been completed, and the RI Report was submitted in March 1996. Results indicate that the majority of individual hazardous substance sites in OU 6 do not require cleanup. Two individual hazardous substance sites were transferred to the Industrial Area OU.

The two phases of OU 7 were combined with regulatory agency approval. This, along with use of a presumptive remedy to cap the present landfill, deleted 10 IAG milestones from this subproject. Design of a passive leachate collection system for the OU 7 present landfill was completed. OU 7 field work was completed in FY 95. An IM/IRA decision document was completed in June 1996. Leachate collection began in April 1996, after completion of the Proposed Action Memorandum. Approximately 663,000 gallons were collected and treated.

Instead of continuing with studies in the Industrial Area, an IM/IRA has been implemented. This involves sampling of soil, air, groundwater, and surface water. A report was provided to the regulators in March 1996.

Site-wide characterization efforts were continued including seep flow measurement, 3-dimensional computer modeling of hydrogeology, and monitoring of new and existing monitoring wells at reduced levels (150 wells versus 300 wells in the past). A surface water modeling report was published in September 1996.

The following public involvement activities were completed:

- Informational meetings were conducted and comments solicited on the RFETS 10-Year Plan (now the draft RFETS 2006 Plan).
- Four quarterly public information meetings were held.
- The Technical Review Group continued to meet monthly to provide early public input on draft documents to the regulatory agencies.
- Public comments were solicited on proposed changes to state water quality standards.
- Monthly coordination meetings were held with EPA and CDPHE.
- A site tour was provided for members of the Colorado Water Quality Control Commission.
- All required documents were placed in RFETS public reading rooms and five other repositories.
- Tours, presentations, and briefings on various topics were presented to members of the public including the Rocky Flats Citizens Advisory Board and the Rocky Flats Local Impacts Initiative.
- There were formal public comment periods on various documents as required by CERCLA.
- Public comment periods were held on the Rocky Flats Cleanup Agreement and on the Soil Action Level framework.

Progress in Conducting Remedial Actions

After public comments and regulatory agency design approval, an IRA for OU 1 (a french drain groundwater collection system and Building 891 treatment facility) was constructed and placed into operation in May 1992. The OU 1 IRA treatment facility collected and treated over 4 million gallons of potentially

contaminated groundwater through FY 96. Sampling has verified that contamination levels of the water being collected by the OU 1 IRA from the Building 881 footing drain are within acceptable limits, and authorization was granted by the regulatory agencies in 1994 to cease pumping this water to the french drain. This source accounted for 85 to 95 percent of the water treated by the OU 1 IRA. Several small radioactive "hot spots" were removed in September 1994. The primary source of groundwater contamination will be removed by excavation and thermal desorption when funding becomes available.

An IRA for OU 2 which collects, treats, and releases potentially contaminated surface water was completed and placed into operation in April 1992. The OU 2 IRA treatment facility has collected and treated over 24 million gallons of potentially contaminated surface water. Sampling has verified that the contamination level of the water being collected from two of the three surface water sources by the OU 2 IRA, which account for about 90 percent of the surface water collected, is within acceptable limits. Authorization to cease collection and treatment of water from these sources was granted by the regulatory agencies in 1994 for all but one location. The OU 1 and OU 2 water treatment plants were combined in FY 95 and are now used to treat all site groundwater. In FY 96, 278,000 gallons were treated.

A second IRA for OU 2 was mandated by the regulatory agencies in FY 1991. The Phase I design of this IRA, which evaluated conventual vacuum-enhanced vapor extraction technology to extract volatile organics from vadose-zone soils, was approved by the regulatory agencies, and construction was completed in the first quarter of FY 94. Approximately 915 pounds of volatile organic materials have been removed from the ground, processed, and disposed of. This IRA has now been canceled with approval of the regulatory agencies.

The Ryan's Pit removal action near Individual Hazardous Substance Site 109 was completed in FY 95. Approximately 200 cubic yards of contaminated soil were excavated. In FY 96, these soils were thermally desorbed and returned to the trench.

Construction of the Option B offsite water projects funded by DOE through grants to local municipalities continued through 1996. The Standley Lake Protection Project is complete, since the Woman Creek Reservoir became operational in January 1996. The City of Broomfield's new water treatment facility is under construction, with completion expected in the Spring of 1997. Broomfield has also purchased nearly 60 percent of the water needed to firm its primary supply.

The OU 4 Interceptor Trench System was in operation throughout the year, collecting potentially contaminated near-surface groundwater and surface runoff. Approximately 2.7 million gallons were collected, stored in temporary holding tanks, and ultimately processed by two evaporative water treatment facilities located at the site. Due to high operational costs of the evaporator, a new passive water treatment plant to treat this water was proposed. Initiation of the construction and use of the mobile treatment unit are uncertain.

Decommissioning of Building 889 was completed in August. The action included demolition of the building and disposition of all wastes generated during the operation. Two fuel oil tanks, two electrical substations, and several guard shacks also were decommissioned during the fiscal year.

The interim action at Individual Hazardous Substance Site 129 was completed by removal and shipment for incineration of 2,500 gallons of RCRA-contaminated oils and by foaming the tank.

Approximately 3,500 cubic yards of contaminated soils from Trenches T3 and T4 were treated by thermal desorption and 300 cubic yards of debris removed. Most of the soils were returned to the excavation and the area was regraded and reseeded.

Seven PCB "hot spots" were excavated at RFETS, generating 437 cubic yards of Toxic Substances Control Act (TSCA) waste that was shipped to offsite disposal.

The final draft of the Pond Water Management IM/IRA was completed and submitted to CDPHE and EPA on November 23, 1993. The draft was required to be developed under the IAG by the regulatory agencies in 1992, even though there is no imminent hazard to public health or the environment from water on the plant site. The document went to dispute under the IAG; the parties met on April 15, 1994 and came to a resolution on dispute issues. DOE has not agreed with the use of CERCLA in lieu of the Clean Water Act to regulate surface waters; therefore, as part of the resolution, language addressing the designation of the ponds as "waters of the U.S." and preservation of DOE's rights to appeal this issue was included. A new pond operations plan, which will supersede the Pond Water IM/IRA, is being negotiated with the regulators and local communities. A draft will be released for public review in FY 97.

Enforcement Activities

No enforcement actions related to environmental restoration activities occurred in FY 96.

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IDAHO NATIONAL ENGINEERING LABORATORY

Idaho Falls, Bonneville County, Idaho

Office: Idaho Operations Office

Size: 569,600 acres (890 square miles)

NPL Status: Placed on the NPL on November 21, 1989.

Mission: The Idaho National Engineering Laboratory (INEL) was established in 1949 by the U.S. Atomic Energy Commission as an area to build, test, and operate various nuclear reactors, fuel processing plants, and support facilities with maximum safety and isolation. Originally known as the National Reactor Testing Station, the site was renamed the INEL in 1974 to reflect the broad scope of engineering activities now conducted at the site. Prior to its establishment, the site was used as a World War II gunnery range for the U.S. Navy and U.S. Army Air Corps.

Overview of Environmental Conditions: Onsite groundwater and soil contamination from both known and potential sources resulting from past disposal practices. Contaminants of concern include chromium, volatile organic compounds (VOCs), carbon tetrachloride, and radionuclides.

CERCLA/RCRA Remediation Funding in FY 96: $89,326,000

Progress in Reaching Interagency Agreement

The INEL Federal Facility Agreement/Consent Order (FFA/CO) and Action Plan between DOE, EPA Region X, and the State of Idaho was executed on December 9, 1991. The FFA/CO supersedes the RCRA 3008(h) Consent Order and Compliance Agreement (COCA) and covers all CERCLA response requirements as well as RCRA corrective action requirements. All parties agreed to initiate the FFA/CO Action Plan under the COCA in September 1991 while the FFA/CO was being finalized. The FFA/CO also includes Argonne National Laboratory (ANL) - West and the Naval Reactors Facility (NRF), which are located at INEL.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for environmental restoration under the IAG Action Plan at the INEL total $98.9 million of appropriated funding for FY 97 and $74.4 million for FY 98 according to the request in the President's Budget.

Public Comments Regarding Interagency Agreements

Public attention was focused on INEL's FFA/CO when the Governor of Idaho was negotiating a settlement agreement with the Federal government over the shipment of naval spent fuel to the INEL. One of the provisions of the "Settlement Agreement" is that INEL's Environmental Restoration Program, as stated in the FFA/CO Action Plan, will be implemented. Additionally, when DOE-Idaho solicited public comments on the draft INEL Environmental Management Ten-Year Plan (now the draft INEL 2006 Plan), citizens had two principal concerns: 1) the Ten-Year Plan (draft INEL 2006 Plan) be reconciled to the FFA/CO without weakening the FFA/CO; and 2) the

FFA/CO continue to receive funding necessary to comply with required cleanup actions that resulted from agency decisions following public comment periods on cleanup plans.

The agencies also initiated plans in FY 96 to host a citizens "focus group" in early FY 97 to identify ideas and suggestions for improving how the public gets involved in DOE-Idaho's cleanup decision-making process. This effort was undertaken to possibly update the INEL's Community Relations Plan to meet the changing public involvement needs of the community.

Progress in Conducting Remedial Investigations/Feasibility Studies

INEL

Major documents submitted to EPA and the State of Idaho during FY 96 were:

- Test Area North draft Comprehensive RI/FS Work Plan (OU 1-10);
- Test Area North Groundwater draft Remedial Design/Remedial Action (RD/RA) Scope of Work (OU 1-07B);
- Test Reactor Area draft Comprehensive Remedial Investigation/Baseline Risk Assessment (RI/BRA) and draft RI/FS Report (OU 2-10);
- Idaho Chemical Processing Plant draft Comprehensive RI/FS (OU 3-13);
- Central Facilities Area draft Comprehensive RI/FS Statement of Work (OU 3-13);
- Central Facilities Area Landfills draft RD/RA Work Plan (OU 4-12);
- Power Burst Facility/Auxiliary Reactor Area draft Comprehensive RI/FS Statement of Work (OU 5-12);
- Stationary Low Power-1/Boiling Water Reactor Experiment Reactor (SL-1/BORAX-1) Reactor Burial Grounds draft final Record of Decision (OU 5-05/6-01);
- Radioactive Waste Management Complex Pits and Trenches draft final RI/FS Work Plan (OU 7-13/14);
- Organic Contamination of the Vadose Zone at Radioactive Waste Management Complex draft final RD/RA Work Plan (OU 7-08);
- Pit 9 (Radioactive Waste Management Complex) 90 percent design of support facilities (OU 7-10);
- NRF Inactive Landfills draft RA Report (OU 8-05/06); and
- Final Work Plan for the Comprehensive RI/FS (OU 8-08).

ANL-West

The RI/FS Work Plan for ANL-West was completed in FY 96.

The following are documents that were developed and submitted to EPA and the State of Idaho during FY 96 for ANL-West, plus associated activities:

- Draft RI Report (OU 9-04); and
- Draft RI Work Plan.

Progress in Conducting Remedial Actions

No Further Action determinations were approved for 23 potential release sites following the guidance outlined in the FFA/CO.

INEL

The following activities were accomplished through FY 96 at the INEL.

Assessment

- 13 of 20 RODs complete.
- 152 of 169 Track 1 scoping investigations complete.
- 33 of 38 Track 2 scoping investigations complete.
- Sampling of Test Area North mixed-waste underground storage tank (V-Tank) contents for treatability studies and Work Plan submittal and field implementation for the Comprehensive RI/FS.
- Completion of the Test Reactor Area Draft Comprehensive RI/FS and Baseline Risk Assessment reports.
- Completion of the Idaho Chemical Processing Plant Draft Comprehensive RI/FS report.
- Completion of the final ROD for Central Facilities Area Landfills I, II, and III; and completion of the Draft Central Facilities Area Comprehensive RI/FS Scope of Work.
- Completion of the Final ROD for the SL-1 and BORAX-1 reactor burial grounds contents and completion of Power Burst Facility/Auxiliary Reactor Area Comprehensive RI/FS Draft Scope of Work.
- Completion of the Radioactive Waste Management Complex Transuranic Waste Pits and Trenches RI/FS field work.
- Cost-saving consolidation of the Radioactively Contaminated Soils RI/FS into the INEL-wide Comprehensive RI/FS, and preliminary scoping discussions with regulatory agencies for the WAG 10 Comprehensive RI/FS.

Cleanup

- Resumption of Test Area North Groundwater Treatment Facility operation using a new re-injection well, treatment of 1.1 million gallons of water, and negotiation with regulatory agencies to achieve a more cost-effective approach to groundwater treatability studies and groundwater pumping strategy.

- Completion of soil treatment for Central Facilities Area Calcine Pit Removal Action; initiation of the French Drains Removal Action of heavy metal and radionuclide-contaminated soil; completion of lead-contaminated soil removal action; initiation of petroleum-contaminated soil removal action; and completion of the RD/RA Scope of Work and initiation of soil cover installation remediation for Central Facilities Area Landfills I, II, and III.

- Excavation and contaminated soil consolidation at SL-1 and BORAX-1; initiated placement of rip-rap cap for SL-1 and BORAX-1; and initiation of Auxiliary Reactor Area-02 removal action to remove septic tank mixed waste.

- Initiation of the Radioactive Waste Management Complex Vapor Vacuum Extraction Phase I RA, which removed 15,500 pounds of volatile organic compounds from the vadose zone; and completion of 80 percent of the Pit 9 treatment building construction, 40 percent of the retrieval building construction, and 80 percent of the administration area and offsite construction.

- Completion of the 22-acre Naval Ordnance Disposal Area removal action; continuation of area- wide ordnance removal action; and completion of Rad Contaminated Soils removal action.

- Three inactive landfill areas at the NRF (OU 8-05/06) were capped with native soil covers.

ANL-West

The following activities were accomplished in FY 96 at ANL-West:

Assessment

- 37 of 40 potential release sites signed off as “No Further Action.”

PADUCAH GASEOUS DIFFUSION PLANT

Paducah, McCracken County, Kentucky

Office: Oak Ridge Operations Office

Size: 3,423 acres (5.3 square miles)

NPL Status: Placed on the NPL on May 31, 1994.

Mission: The Paducah Gaseous Diffusion Plant, established in 1950 on the grounds of the old Kentucky Ordnance Works Trinitrotoluene Plant, is actively engaged in the enrichment of uranium using gaseous diffusion technology. Most of the uranium output from the plant is designated for the commercial sector. In July 1993, DOE officially transferred responsibility for site operations to the U.S. Enrichment Corporation in accordance with the Energy Policy Act of 1992.

Overview of Environmental Conditions: The site consists of 204 Solid Waste Management Units (SWMUs) and areas of concern, which have been divided into 30 Waste Area Groups (WAGs). Onsite chemical contamination of soils was identified. Offsite groundwater contamination consists of trichloroethylene and technetium-99; offsite creek sediment contamination consists of PCBs.

CERCLA/RCRA Remediation Funding in FY 96: $45,031,000

Progress in Reaching Interagency Agreement

Although Paducah Gaseous Diffusion Plant is listed on the NPL, remediation is currently being addressed under authority of a RCRA 3008(h) Administrative Consent Order that was signed November 4, 1988, and a RCRA Part B Permit (referred to as a Hazardous and Solid Waste Amendments permit) that was jointly issued by EPA and the State of Kentucky on July 16, 1991. DOE is working with EPA and the state to develop an IAG; while negotiations are still underway, DOE expects the agreement to be signed in 1996.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for environmental restoration at Paducah Gaseous Diffusion Plant total $39.3 million of appropriated funding for FY 97 and $44.5 million for FY 98 according to the request in the President's Budget.

Public Comments Regarding Interagency Agreements

During FY 96, the FFA is under development and thus the public has not commented on it. The FFA is expected to be released for comment during FY 97.

Progress in Conducting Remedial Investigations/Feasibility Studies

The Administrative Consent Order for Paducah Gaseous Diffusion Plant was executed by DOE and EPA on November 4, 1988. The Resource Conservation and Recovery Act (RCRA) Part B Permit with EPA and the State of Kentucky was

executed on July 16, 1991. During FY 96, work completed or underway at Paducah Gaseous Diffusion Plant was as follows:

- Completed RODs for WAG 1 and 7, and WAG 23;
- Completed the WAG 22 (SWMUs 2 and 3) Design Sampling and WAG 22 (SWMUs 7 and 30) Assessment;
- Continued the water policy of making drinking water available to people whose wells were contaminated. In addition, a covenant was signed with these individuals whereby they agreed not to use the wells in the future;
- Continued sampling of approximately 140 groundwater monitoring wells and 30 residential wells;
- Continued negotiation of the FFA, to direct overall remedial work.
- Continued development of the waste management strategy and site treatment plan;
- Completed the WAG 6 Preliminary Assessment and RI Work Plan; and
- Completed construction of the cap at the Closed Landfill.

Progress in Conducting Remedial Actions

During FY 96, the following work was completed or underway at Paducah Gaseous Diffusion Plant:

- Completed construction of the Phase I Waste Storage Facility, which is intended to store remedial waste.
- Completed construction of the New Site Landfill, which is intended to support remedial actions.
- Began construction of the NE Plume Interim Remedial Action.
- Continued development of dense nonaqueous phase liquid technology and completed construction of a decontamination pad and field support laboratory to support all remedial action projects.
- Completed closure of C-409 and C-400-C under RCRA.
- Completed the WAG 17 Removal Action and Assessment.

Work is being conducted under individual RODs.

ST. LOUIS SITE
(St. Louis Airport Site and Vicinity Properties, Latty Avenue Properties, and St. Louis Downtown Site)
Hazelwood, St. Louis County, Missouri

Office: Oak Ridge Operations Office

Size: 21.7 acres (0.03 square mile)

NPL Status: Placed on the NPL on October 4, 1989, except St. Louis Downtown Site, which is not an NPL site.

Mission: The St. Louis Site, established as a storage site in 1946, stored radioactive residues, contaminated scrap, and equipment generated by processing plants in St. Louis from 1946 to 1969. Cleanup authority at the site was acquired by DOE under a Congressional mandate and is managed by DOE under its Formerly Utilized Sites Remedial Action Program (FUSRAP). FUSRAP sites comprise sites formerly associated with the Manhattan Engineer District Project and the Atomic Energy Commission. Because these sites are not owned or operated by DOE, they do not appear on the docket.

Overview of Environmental Conditions: Onsite soil and groundwater contamination by radioactive constituents. Offsite soil and sediment contamination also identified.

CERCLA/RCRA Remediation Funding in FY 96: $15,261,000

Progress in Reaching Interagency Agreement

DOE and EPA Region VII executed an FFA for the St. Louis Site on June 26, 1990. The St. Louis Site consists of the St. Louis Airport Site and Vicinity Properties, and Latty Avenue Properties, all of which were added to EPA's NPL in October 1989. An additional site, not included in the original 1989 NPL, is being addressed in accordance with requirements stipulated in the FFA to make the remediation process more efficient. This site, identified as the St. Louis Downtown Site, is now part of DOE's FUSRAP program.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for environmental restoration under the FFA total $23.4 million of appropriated funding for FY 97 and $41.0 million for FY 98 according to the request in the President's Budget.

Public Comments Regarding Interagency Agreements

No new public comments regarding the FFA were received in FY 96.

Progress in Conducting Remedial Investigations/Feasibility Studies

The RI/FS work plan for the St. Louis Site was approved by EPA Region VII in calendar year 1991. A public scoping meeting for the preparation of an RI/FS was held in January 1992. An RI report was approved by EPA Region VII in 1992. Some limited additional field investigation was performed in FY 92 to supplement the existing characterization data. The Initial Screening of Alternatives was approved by EPA Region VII in FY 92. Based on the results of the Initial

Screening of Alternatives, an FS was prepared and issued for review to EPA Region VII and the State of Missouri in FY 93.

The FS was completed and submitted to EPA and the State of Missouri for review. EPA has delayed final approval of the FS, and DOE has agreed to reconsider the remedy selection proposed in the draft proposed plan. EPA and DOE have agreed to postpone the submittal of the PP and defer the ROD in order to solicit input from a St. Louis stakeholder group. This group, named the St. Louis Site Citizens Remediation Task Force, was established in September 1994. It consists of elected officials, state and Federal regulators, public health officials, utility and business representatives, and interested citizens. The PP will be released for public comment in FY 97.

Progress in Conducting Remedial Actions

Remedial action was performed at nine vicinity properties in FY 96. One full city block was remediated and returned to the public for industrial use at the Downtown Site. Final remedial action will be implemented following signing of the ROD. Proposals for interim cleanup measures have been made for properties in the vicinity of the St. Louis Airport Site, the Latty Avenue Site, and the St. Louis Downtown Site.

WELDON SPRING SITE REMEDIAL ACTION PROJECT

St. Charles County, Missouri

Office: Oak Ridge Operations Office

Size: 226 acres (0.4 square mile)

NPL Status: Quarry placed on the NPL on July 22, 1987 and Chemical Plant and Raffinate Pits placed on the NPL on March 13, 1989.

Mission: The Weldon Spring Site was developed by the U.S. Army for explosives production during World War II, and was operated by the Atomic Energy Commission from 1955 to 1966 as a uranium processing plant.

Overview of Environmental Conditions: Soil, surface water, groundwater, and building rubble contamination resulting from the handling and disposal of uranium ore concentrates and scrap.

CERCLA/RCRA Remediation Funding in FY 96: $53,085,000

Progress in Reaching Interagency Agreement

DOE and EPA Region VII entered into an FFA, signed on August 12, 1986. An amended FFA was signed on June 30, 1992.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for environmental restoration under the FFA at the site total $65.9 million of appropriated funding for FY 97 and $67.5 million for FY 98 according to the request in the President's Budget.

Public Comments Regarding Interagency Agreements

The public comment period for the FFA began on March 22, 1992 and remained open for 45 days. No comments were received during this period.

Progress in Conducting Remedial Investigations/Feasibility Studies

Initial work was started under a CERCLA/National Environmental Policy Act (NEPA) Federal Facility Compliance Agreement executed in 1986. Subsequently, the site was placed on the NPL in July 1987. The Weldon Spring Site project issued a work plan in August 1988 which presented the overall strategy for accomplishing remedial actions. That strategy included the development of an umbrella RI/FS for the Chemical Plant Area, an RI/FS for Quarry bulk wastes, an RI/FS for Quarry residuals, and several interim response actions. A need was subsequently identified to specifically address groundwater at the Chemical Plant Area through an additional RI/FS.

Major accomplishments in FY 96 include:

- Submitted the Draft RI/BRA for Site Groundwater OU to EPA in September 1996.

Progress in Conducting Remedial Actions

Remedial actions accomplished during FY 96 include:

- 60 percent of the design of the Full-Scale Sludge Processing Facility was completed by September 1996.

- To date, 43 of the 44 buildings have been demolished.

- As of September 1996, 47 million gallons of water were treated during FY 96, and a total of 148 million gallons of water have been treated at the Quarry Water Treatment Plant and Site Water Treatment Plant.

- Completed construction and began operation of Train 2 at the Site Water Treatment Plant.

- Completed excavation approximately 7,000 cubic yards in the Quarry bulk waste removal effort in September 1995 for a cumulative excavated volume of 126,000 cubic yards. Completed the bulk waste removal at the Quarry in October 1995.

- Completed the excavation and removal of 19 of 27 building foundations and 177,000 cubic yards of contaminated soil in September 1996.

- Completed the remediation of Vicinity Property Number 9 in February 1996.

- Completed the site preparation for the construction of the On-Site Disposal Facility in September 1996 by developing the soil borrow area, the site drainage facilities, construction material staging area, soil borrow haul road, and the underpass and realignment of Highway 94.

- Completed 100 percent of the design of the Disposal Facility in June 1996.

MAYWOOD SITE
Maywood/Rochelle Park/ Lodi, Bergen County, New Jersey

Office: Oak Ridge Operations Office

Size: 12 acres (0.02 square mile)

NPL Status: Placed on the NPL on September 8, 1983.

Mission: The Maywood Site, a privately owned site previously used for thorium extraction, was acquired by DOE in 1984. DOE is cleaning up the site under direction from Congress, as the site is managed by DOE under FUSRAP. The Maywood Site is used specifically for storage of radiologically contaminated materials resulting from remedial activities conducted on properties in the vicinity of the Maywood Site.

Overview of Environmental Conditions: Onsite and offsite soil has been contaminated with radiological contaminants and associated chemicals. Approximately 54 remaining vicinity properties are radiologically contaminated.

CERCLA/RCRA Remediation Funding in FY 96: $17,015,000

Progress in Reaching Interagency Agreement

An FFA for the Maywood Site, signed by EPA Region II and DOE on July 23, 1990, became effective in April 1991. Schedules were subsequently negotiated for the DOE submittal of the RI, the baseline risk assessment, and the FS. EPA Region II reviewed and approved the schedules on November 25, 1991.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for environmental restoration under the FFA total $14.8 million of appropriated funding for FY 97. The FY 98 funding level will be determined after final congressional action.

Public Comments Regarding Interagency Agreements

No new public comments regarding the FFA were received in FY 96.

Progress in Conducting Remedial Investigations/Feasibility Studies

Significant progress was made in FY 96 on the completion of RI/FS activities at the site. DOE and EPA Region II are negotiating a schedule for issuing the PP for the site. Comments on the PP were provided in September 1995, and the plan will be released for public comment in FY 97, after resolution with EPA.

Progress in Conducting Remedial Actions

Substantial progress has been made using removal actions. The site consists of the DOE-owned Maywood Interim Storage Site and vicinity properties, all of which are contaminated. As of May 1986, 25 of the vicinity properties were cleaned up using removal actions, and

the resulting waste was placed in storage in the engineered cell at the Maywood Interim Storage Site. During FY 94, a dispute with EPA over cleanup criteria was resolved and agreement was reached with the State of New Jersey on the cleanup criteria for residential properties. Removal of the Maywood Interim Storage Site Pile began in 1995. As of September 1996, approximately 75 percent of the pile had been removed. Completion of the Maywood pile removal is scheduled for December 1996. Remedial action continued at selected vicinity properties. Ten contaminated vicinity properties were released back to the landowner for unrestricted use during FY 96. Remedial actions will continue at vicinity properties in FY 97.

WAYNE SITE

Wayne and Pequannock Townships, New Jersey

Office: Oak Ridge Operations Office

Size: 7 acres (0.01 square mile)

NPL Status: Placed on the NPL on September 21, 1984.

Mission: The Wayne Site, a privately owned site previously used for thorium extraction, was acquired by DOE in 1984. DOE is cleaning up the Wayne Site under the direction of Congress, as the site is managed by DOE under FUSRAP. The Wayne Site is used specifically as an interim storage site for contaminated material removed during cleanup of the site and several vicinity properties.

Overview of Environmental Conditions: Onsite soil contaminated by radiological and possible chemical constituents.

CERCLA/RCRA Remediation Funding in FY 96: $6,100,000

Progress in Reaching Interagency Agreement

An FFA for the Wayne Site, signed by EPA on July 17, 1990 and by DOE on July 23, 1990, became effective in April 1991. Schedules were subsequently negotiated for the submittal of the RI, the baseline risk assessment, and the FS reports. EPA Region II reviewed and approved the schedules on November 25, 1991.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for environmental restoration under the FFA total $5.5 million of appropriated funding for FY 97. The FY 98 funding level will be determined after final congressional action.

Public Comments Regarding Interagency Agreements

No new public comments regarding the FFA were received in FY 95.

Progress in Conducting Remedial Investigations/Feasibility Studies

Significant progress was made during FY 95 on the completion of RI/FS activities at the site. To date, DOE has met all RI/FS milestones specified in the FFA. DOE continues to operate a public information center at the site to provide information on RI/FS progress.

The RI report for the Wayne Site was issued in October 1993. The Baseline Risk Assessment Report was finalized in January 1994. The EPA Final Draft

FS Report was issued in March 1994. The PP for the site was developed, EPA Region II provided comments on the plan in September 1995, and the plan will be released for public comment in FY 98 after issues related to site cleanup are resolved with EPA Region II.

Progress in Conducting Remedial Actions

Earlier removal actions at the site entailed removing waste from the vicinity properties and storing it in an engineered waste storage pile at the Wayne Interim Storage Site. In FY 94, all remaining vicinity properties at the Wayne Site were remediated. A non-time-critical removal action was initiated in FY 95 to ship contaminated material from the interim storage pile to a commercial disposal facility in Utah. During FY 96, approximately 10,000 cubic yards were removed from the storage pile and shipped to the disposal site. Pile removal is approximately 33 percent complete as of September 1996.

BROOKHAVEN NATIONAL LABORATORY

Upton, Suffolk County, New York

Office: Chicago Operations Office

Size: 5,300 acres (8.3 square miles)

NPL Status: Placed on the NPL on November 21, 1989.

Mission: Historically, the site was used by the U.S. Army as a post (called Camp Upton) during the First and Second World Wars. The Atomic Energy Commission was given title to the property in 1947.

Brookhaven National Laboratory functions as a design, construction, and operations center for large research facilities such as particle accelerators, nuclear reactors, and synchrotron storage rings for research in high-energy and nuclear physics, chemistry, biology, and energy-related life and environmental sciences.

Overview of Environmental Conditions: Groundwater and soil contamination.

CERCLA/RCRA Remediation Funding in FY 96: $20,426,000*

*An additional $4,470,000 of prior year unobligated funds was provided to Brookhaven National Laboratory.

Progress in Reaching Interagency Agreement

DOE, EPA Region II, and the State of New York executed the IAG for Brookhaven National Laboratory on February 28, 1992. The effective date of the agreement was May 27, 1992. The IAG integrates both corrective action requirements under RCRA and response action requirements under CERCLA.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for environmental restoration under the IAG at the Brookhaven National Laboratory total $18.4 million of appropriated funding for FY 97 ($3.3 million was from prior year unobligated funds) and $22.0 million for FY 98 according to the request in the President's Budget.

Public Comments Regarding Interagency Agreements

No new public comments regarding the IAG were received in FY 96.

Progress in Conducting Remedial Investigations/Feasibility Studies

In FY 95, the following major documents were submitted to EPA and the State of New York:

- OU I RI/RA;
- OU II/VII RI/FS Work Plan;
- OU IV FS, draft PP, and draft ROD; and
- Groundwater removal action draft EE/CA and Action Memorandum.

In FY 96, the following major documents were submitted to EPA and the State of New York:

- OU II RI/RA (September 1996);
- OU IV Final ROD (March 1996);
- OU V RI/RA (July 1996); and
- OU VI PP (September 1996).

Progress in Conducting Remedial Actions

Four underground storage tanks were removed at Building 650 in August 1994, and a draft Completion Report was prepared. Characterization work for the Landfills Removal Action was completed, and a draft EE/CA was submitted to EPA Region II and the State of New York on July 28, 1994. Preparation of the design for the Current Landfills Cap began in FY 94, and the draft Design/Closure Report was submitted on July 25, 1994. A contractor was selected for the D Tanks removal action and mobilization occurred in July 1994. Dismantlement of the tanks started on September 14, 1994. Draft Designs for the Cesspool Removal Action were submitted in August 1994. The Building 464 soil removal action was completed in December 1993.

In FY 95, the following remedial actions occurred:

- Twenty-three cesspool removals were completed;
- Four underground storage tanks were cut and packaged and the waste shipped offsite;
- D-Tanks removal was completed; and
- Landfill capping was initiated.

In FY 96, the following remedial actions occurred:

- The “current” landfills were capped in November 1995;
- Capping of the “former” landfill was initiated;
- Public water was provided to over 500 residences that are adjacent to BNL;
- The cesspool removal action was completed in March 1996;
- Construction of OU I and OU III groundwater/treatment was initiated as a removal action; and
- Design of the OU IV remedy was initiated.

Enforcement Activities

A $100,000 assessment of penalties under RCRA/TSCA was pending throughout 1992 and 1993. A settlement of $62,000 was reached in the spring of 1994. On May 11, 1994, DOE, EPA, and the operating contractor (Associated Universities Incorporated) signed an agreement on the penalty, which also included preparation of a Wildlife Survey and Management Plan and an internal audit of the hazardous waste management system. These activities were completed in October 1995 and are awaiting regulatory approval.

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Fernald, Hamilton County, Ohio

Office: Ohio Field Office Project

Size: 1,050 acres (1.6 square miles)

NPL Status: Placed on the NPL on November 21, 1989.

Mission: The Fernald Environmental Management Project (FEMP), formerly the Feed Materials Production Center, was constructed in the early 1950s and was used to produce uranium metal products for use by the Government. Production was suspended in July 1989.

Overview of Environmental Conditions: Soil and groundwater contamination by radionuclides above background levels both onsite and in adjacent offsite areas. Release of radon and the retention of large quantities of low-level radioactive and mixed wastes in onsite storage areas are also of significant concern.

CERCLA/RCRA Remediation Funding in FY 96: $179,821,000

Progress in Reaching Interagency Agreement

At the time when FEMP was placed on the NPL, the site was engaged in activities aimed at compliance with the terms of an existing Federal Facility Compliance Agreement signed on July 18, 1986 between DOE and EPA Region V. The CERCLA portion of the Federal Facility Compliance Agreement was replaced by the signing of a Consent Agreement (an IAG) with EPA on April 9, 1990, which became effective on June 29, 1990. The Consent Agreement provides for the execution of RI/FSs for five OUs and the performance of removal and remedial actions at the facility. DOE and EPA signed an Amended Consent Agreement which was executed on September 20, 1991. The Amended Consent Agreement revised the milestones for submittal of these RI/FS documents to EPA and expanded the scope of the RI/FS to the former production area. The Amended Consent Agreement was modified in April 1993 as a result of an informal settlement concerning OU 2 schedules.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for environmental restoration under the Amended Consent Agreement at the FEMP total $188.1 million of appropriated funding for FY 97 and $160.2 million for FY 98 according to the request in the President's Budget.

Public Comments Regarding Interagency Agreements

No new public comments regarding the Consent Agreement were received in FY 96.

Progress in Conducting Remedial Investigations/Feasibility Studies

The RI/FS process at the FEMP was initiated in July 1986 under the provisions of a 1986 Federal Facility Compliance Agreement. The 1990 CERCLA 120 and 106 Consent Agreement amended the CERCLA portion of the 1986 agreement and restructured the ongoing investigations into five distinct OUs. The 1991 Amended Consent Agreement revised the milestones for submittal of RI/FS documentation to EPA for five OUs, whereby separate RI/FS reports and RODs would be issued for each of the OUs. Additionally, the amended IAG established milestone dates for the submittal of select documents addressing all five OUs and a final combined site-wide OU. Progress in completing the RI/FS for each of the five OUs as defined under the provisions of the Amended Consent Agreement (as modified in April 1993) is summarized below.

Affecting All OUs

The Amended Consent Agreement provided for the submittal of a risk assessment work plan to establish the specific approach, parameters, and models to be employed to conduct OU baseline and FS risk assessments. Approval of this work plan was received from EPA in May 1992. A site-wide characterization report, required by the agreement, providing a preliminary site-wide baseline assessment was transmitted to EPA in August 1992. A site-wide CERCLA quality assurance plan pertaining to all facility environmental sampling and analysis was approved by EPA in September 1992. This plan integrates DOE and EPA quality assurance policies and principles. The Sitewide Characterization report was approved by EPA on May 28, 1993. The preliminary Sitewide Baseline Risk Assessment was approved by EPA on April 1, 1994.

The FEMP is currently in the process of negotiating a site-wide environmental monitoring plan, termed the Integrated Environmental Monitoring Plan. The document was submitted in draft form to EPA on August 1, 1996. The revised document is scheduled to be submitted to EPA on January 31, 1997. This plan, when approved, will establish the site-wide monitoring plan to address remediation activities through the redirection of existing environmental monitoring program elements.

OU 1: Waste Storage Area

This OU comprises the existing six FEMP waste pits, the Clearwell, the Burnpit, berms, liners, and soil within the OU boundary. The initial Screening of Alternatives Report was approved by EPA in January 1991. The final RI Report was submitted to EPA in February 1994 and, following comment resolution and incorporation, was approved by EPA in August 1994. The OU 1 draft FS Report and PP were submitted to EPA in March 1994. The Final Draft FS Report and PP were approved by EPA in August 1994. The PP was released for review by the public in August 1994, and a Public Hearing on the PP was held in August 1994. The Draft ROD for OU 1 was submitted to EPA in November 1994, and the Final ROD was signed in March 1995. The OU 1 draft Remedial Design Work Plan (RDWP) was submitted in April 1995 to EPA, and the final RDWP was approved in June 1995. As identified by RDWP, the Preliminary Design Package is expected to be submitted to EPA on October 23, 1996, and the Pre-Final Design Package was submitted to EPA on March 20, 1996, both of them on schedule.

A Fernald Environmental Restoration Management Corporation task team, which includes the DOE, Fernald Area Office, has initiated definition of the scope, schedule, cost, and pros and cons of privatization of activities associated with the remediation of the waste pits. Initial review has indicated that the privatization concept could be used site-wide on other projects.

OU 2: Other Waste Units

This OU comprises the FEMP solid waste landfill, lime sludge ponds, flyash piles, and south field area. Site investigation activities within this unit included the completion of geophysical surveys, collection of representative waste and leachate samples from each waste unit, and the completion of over 25 wells in the vicinity of the waste units.

In accordance with the April 1993 revisions to the Amended Consent Agreement, the OU 2 revised RI report was submitted to EPA and Ohio and approved in January 1994. A formal public comment period began on October 26 and ended on November 25, 1994. A request to extend the public comment period was received on November 2, 1994. The Ross Township Board of Trustees formally requested a 30-day extension to the public comment period in order to allow additional time for the public to review the *Proposed Plan for Remedial Actions at Operable Unit 2*. In January 1995, the OU 2 FS/PP was approved. The OU 2 Draft ROD was submitted to EPA in February 1995, and approval was received in June 1995. The OU 2 RDWP was submitted to EPA in November 1995. The RD Work Package (30 percent Remedial Designs Work Package) was submitted to EPA in May 1996 for the Waste Units. The Pre-Final Design Package for Roads was submitted to EPA in May 1996. The Final Remedial Action Work Package for the Onsite Disposal Facility was submitted in June 1996, and in August 1996 for the Roads.

OU 3: Production Area and Production-Associated Facilities

This OU comprises the FEMP former Production Area and production-associated facilities and equipment (including all above- and below-grade improvements), including but not limited to all structures, equipment, utilities, drums, tanks, solid waste, waste products, thorium, effluent lines, K-65 transfer line, wastewater treatment facilities, fire training facilities, scrap metal piles, feed stock, and coal piles. The Interim ROD to decontaminate and dismantle the facilities in OU 3 was approved by EPA in July 1994. The Interim RD/RA Work Plan was submitted to EPA in March 1995 and approved in May 1995. A combined Draft RI/FS/PP for OU 3 was submitted to EPA in September 1995 and was resubmitted in December 1995. The Final OU 3 Draft ROD was submitted to EPA in August 1996. The Draft RD/RA Work Plan is scheduled to be submitted to EPA in November 1996.

OU 4: Silos 1, 2, 3, and 4

This OU comprises the four waste storage silos located in the FEMP waste storage area. The Initial Screening of Alternatives Report was approved by EPA in October 1990. The final RI report was approved in November 1993. The OU 4 FS/PP was conditionally approved in February 1994. The PP was released for review by the public in March 1994, and a Public Hearing on the PP was held in March 1994. After consideration of public input, the Final ROD was signed by EPA in December 1994. Upon finalization of the ROD, the Amended Consent Agreement requires completion of an RDWP. The RDWP defines the strategy and schedule for development of the remedial design. The final RDWP was approved by EPA in June 1995. Consistent with the Final RDWP for OU 4, a phased approach is being utilized to accomplish remedial action activities. A Remedial Action Work Plan (RAWP) is being developed to identify the implementation strategy and schedule for completion of all remedial activities as set forth in the ROD.

There are two phases associated with the OU 4 RAWP. Phase I will focus on initial RA activities in support of the construction of the Fernald Residues Vitrification Plant (FRVP) as follows: Underground Utilities/Site Preparation; Silo Superstructure Construction; and New Radon Treatment System Construction. Phase II will be prepared and submitted separately following integration of sufficient test data from the OU 4 Vitrification Pilot Plant so as to adequately address the following technical work scope: FRVP Process Building Construction and FRVP Operation. The Phase I RAWP was submitted to EPA in December 1995.

Phase I of the Vitrification Pilot Plant construction was completed in May 1996, and operations began in June 1996. The Phase I Pilot Operation is expected to be completed in February 1997.

OU 5: Environmental Media

This OU comprises groundwater, surface water, soil, sediments, and flora and fauna in the vicinity of the FEMP not included in the definition of OUs 1 through 4. The Initial Screening of Alternatives Report was submitted to EPA in November 1992 and was conditionally approved in January 1993. EPA comments were incorporated and the Initial Screening of Alternatives was resubmitted to EPA in March 1993. A treatability study work plan was approved by EPA in September 1992. The RI report was submitted to EPA in June 1994 and approved in February 1995. The draft FS/PP Report was submitted to EPA in November 1994 and approved in April 1995. The OU 5 draft ROD was submitted to EPA in August 1995 and was approved in January 1996. Final OU 5 Remedial Design Work Plan was submitted to EPA in June 1996.

Site Remediation Acceleration

In June 1996, new target funding levels were issued for FY 97 in the range of approximately $264.5 million. As a result of this reduction from the original plan of $276 million funding level, a replan was conducted. The replan indicated a possible extension of one to three years of the Ten-Year Plan (now the Fernald 2006 Plan). However, Fernald Field Office is committed to devise a strategy that will realize the goals that were identified in the Ten-Year Plan (now the Fernald 2006 Plan).

Progress in Conducting Remedial Actions

Final RODs for OUs 1, 2, and 3, and an Interim ROD for OU 4 have been approved by the EPA, and the Final ROD for OU 5 was approved in January 1996. Therefore, site activities at Fernald have moved from the assessment phase into the cleanup phase. Further, several removal actions are planned or are underway.

Removal Actions

Thirty removal actions have been designated for the Fernald site, two of which have multiple phases resulting in 34 actions. These actions have been assigned to various site complexes. Twenty-five actions have been completed, one has been canceled, and the remaining eight are either complete or are being incorporated with RD/RA Work Plans.

Enforcement Activities

In October 1996, FEMP entered into a Final Dispute Resolution with EPA concerning replanning of a milestone for OU 4. Negotiations of the schedule are pending, awaiting agreement by an independent technical review of a path forward, which is expected in the spring of 1997.

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MOUND PLANT
Dayton, Montgomery County, Ohio

Office: Ohio Operations Office

Size: 306 acres (0.5 square mile)

NPL Status: Placed on the NPL on November 21, 1989.

Mission: The Mound Plant has been in continuous use since 1948. Its main mission was to manufacture non-nuclear components and tritium-containing components for nuclear weapons that are assembled at another site. Other activities include the separation, purification, and sale of stable isotopes of the noble gases; solar energy; fossil fuels; nuclear safeguards; waste management; heat source testing (plutonium); and fusion fuel systems. In 1995, the primary mission changed to cleanup to industrial standards, as approved by EPA, in order to sell the site for industrial use.

Overview of Environmental Conditions: Tritium and VOC contamination of onsite and offsite groundwater and soils contaminated with residual plutonium from past onsite operations.

CERCLA/RCRA Remediation Funding in FY 96: $35,971,000

Progress in Reaching Interagency Agreement

DOE and EPA Region V executed an FFA on August 6, 1990. The State of Ohio expressed an interest in developing a three-party agreement, with the State of Ohio being added to the FFA. Negotiations were held on the development of the new three-party FFA, which were culminated by the signing of this new agreement on July 15, 1993.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for environmental restoration under the FFA total $84.4 million of appropriated funding for FY 97 and $83.1 million for FY 98 according to the request in the President's Budget.

Public Comments Regarding Interagency Agreements

Prior to FY 93, limited public comments were received on the original 1990 FFA. Most of those comments inquired why the site was placed on the NPL. Limited comments were received during the FY 93 comment period for the new three-party FFA (no formal comment period in FY 94). EPA Region V, the State of Ohio, and DOE evaluated these comments and determined that no modifications to the FFA were required.

Progress in Conducting Remedial Investigations/Feasibility Studies

The Mound Plant was originally divided into nine OUs that separated the plant into geographic units. In FY 96, Mound rebaselined its cleanup effort to be more action-oriented to result in an acceleration of cleanup at a reduced cost. The site is now divided into "Onsite Areas," "Offsite Areas," and a "Groundwater" element. The Onsite Areas incorporate nearly all work activities

inside the fenceline of the plant associated with areas previously identified in OUs 2, 5, and 6. The Onsite Areas contain 19 release blocks (letters A through S) containing approximately 219 potential release sites that will undergo a Removal Site Evaluation process to determine site uncertainties, potential data needs, and ultimately the appropriate response action required under CERCLA. The potential release sites are evaluated to determine:

- Sites that require No Further Assessment based on existing information (i.e., no problem exists at the site);
- Sites for which a response action is warranted based on existing information (i.e., a problem does exist); and
- Sites for which there is insufficient information available to make a determination (i.e., not able to determine if there is a problem).

The Offsite Work addresses the remediation of the plutonium-contaminated soils and sediment in the Miami-Erie Canal located adjacent to the Mound Plant (within the City of Miamisburg) resulting from a ruptured waste process line in 1969 and the remaining effort of the RI/FS process for OU 9. The Groundwater element addresses the implementation of the groundwater remedy for the VOCs found in a portion of the Buried Valley Aquifer underlying the southwest corner of the plant, also known as OU 1, for which an ROD was completed in FY 95.

Progress in Conducting Remedial Actions

Field work for the Miami-Erie Canal Removal Action was initiated in FY 96. This included clearing the area of trees and brush, constructing new access roads, installing a new stormwater runoff channel, and installing a mobile laboratory.

Design of a permanent Air Sparging/Soil Vapor Extraction and High Vacuum Extraction remedial system was initiated for the implementation of the groundwater remedy for the VOCs addressed in the OU 1 ROD.

The Area 7 Actinium Removal Action removed and shipped 569 boxes of contaminated soil.

Contaminated soils associated with the Fuel Oil Storage Removal Action have been completely removed, and approximately 200 cubic yards of petroleum-contaminated soil have been successfully treated in a bioremediation facility.

In FY 96, EPA, Ohio EPA and DOE determined that 73 potential release sites required no further assessment, 7 potential release sites required a response action, and 43 were determined to require further assessment before a decision can be made. Three of the seven removal actions have been initiated, two (potential release sites 111 and 408) have initiated field work, and one has initiated design work (potential release site 266). The remainder of the removals await availability of funds. Approximately 50 potential release sites underwent assessment prior to the FY 96 decisions. There remain 96 potential release sites to be addressed in FY 97. Additionally, groundwater and regional soils investigations were performed for monitoring and decision-making purposes. As a result of these activities, an additional 86 acres of land have been determined to be protective of human health and the environment and therefore releasable for economic development.

SAVANNAH RIVER SITE
Aiken, Aiken County, South Carolina

Office: Savannah River Operations Office

Size: Approximately 198,400 acres (310 square miles)

NPL Status: Placed on the NPL on November 21, 1989.

Mission: The Savannah River Site (SRS) is located in south-central South Carolina, approximately 25 miles southeast of Augusta, Georgia and 20 miles south of Aiken, South Carolina. The site encompasses 310 square miles and is bordered by the Savannah River on the southwest. Although SRS' primary mission over the past 40 years focused on the production of nuclear materials (primarily tritium and plutonium) for national defense, the site's nuclear production reactors have not operated since 1988. R Reactor was shut down permanently in 1964, and C Reactor was placed in cold standby in 1987. K, P, and L reactors were shut down in 1988 for maintenance and safety upgrades and have never been restarted. As a result, much of the site's mission has turned to environmental restoration and waste management activities. The current program consists of 467 inactive waste and groundwater sites and an estimated 600 facilities that are candidates for decommissioning.

Overview of Environmental Conditions: Onsite soil, groundwater and air emissions associated with chemical and radioactive releases.

CERCLA/RCRA Remediation Funding in FY 96: $83,719,000

Progress in Reaching Interagency Agreement

DOE, EPA Region IV, and the State of South Carolina negotiated an IAG for SRS during calendar years 1990 through 1992. The IAG was executed on January 15, 1993 and became effective on August 16, 1993.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for environmental restoration under the IAG total $100.7 million of appropriated funding for FY 97 and $99.1 million for FY 98 according to the request in the President's Budget.

Public Comments Regarding Interagency Agreements

The IAG Notice of Intent was signed on December 2, 1991. The document was released for a 60-day public review on December 17, 1991; the public comment period ended on February 14, 1992. A public meeting was held on January 23, 1992. Significant public comments focused on the specific roles and jurisdictions of the South Carolina Department of Health and Environmental Control (SCDHEC) and EPA Region IV in maintaining and enforcing DOE SRS cleanup actions.

The public comments also included concerns that the IAG should not limit SCDHEC's RCRA authority. The IAG was revised to better clarify dispute resolution procedures and authorities of the two regulators for oversight of RCRA and CERCLA cleanup activities.

Additionally, public comments showed the need to revise SRS' system of prioritizing waste units. The IAG was revised to include a priority system recommended by EPA, and a responsiveness summary addressing public comments was issued in 1993.

Comments requesting a site advisory board consisting of members of the public were addressed in a revised public involvement plan. SRS developed a site-specific advisory board, called the Citizens Advisory Board, which began functioning in 1994 and has made ten recommendations to DOE.

Progress in Conducting Remedial Investigations/Feasibility Studies

A RCRA 3004(u) permit was issued by EPA Region IV and the State of South Carolina on September 29, 1987. A program plan, which outlines the requirements for the preparation of unit-specific investigation plans and proposed plans, was revised on August 20, 1993. The following activities were accomplished during FY 96:

- Submitted 13 RFI/RI Plans;
- Signed 2 Interim Remedial Action (IRA) RODs;
- Submitted 21 RFI/RI and Baseline Risk Assessments;
- Submitted one Treatability Study Work Plan;
- Completed site screening/evaluation at 42 additional sites and submitted 24 site Evaluation Reports to the regulatory agencies;
- Continued implementation of the Field Investigation Plan at the Mixed Waste groundwater unit and Burial Ground Complex;
- Submitted 10 Corrective Measure Studies/FS Reports on CERCLA sites;
- Initiated field starts at 10 units;
- Submitted eight RD/RA Work Plans and Reports; and
- Submitted 10 Corrective Measures Study/Feasibility Study Reports on CERCLA units.

Progress in Conducting Remedial Actions

The following activities were accomplished in FY 96:

- Initiated 11 RAs and completed one RA;
- Initiated four Time-Critical Removal Actions and completed two;
- Completed off-gas construction of the M-1 Air Stripper unit;
- Initiated Dense Non-Aqueous Phased Liquid remediation at the M-Area Basin;
- Installed two of 12 recirculation wells at the Southern Sector;
- Removed over 340,000 pounds of contaminated vegetation in H-Area;

- Initiated soil cover at the Old Radioactive Waste Burial Ground; and
- Removed 80,000 pounds of solvents in the A/M Area, bringing the total to over 420,000 pounds of solvents removed.

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OAK RIDGE RESERVATION (Oak Ridge National Laboratory; Y-12 Plant; K-25 Site [Oak Ridge Gaseous Diffusion Plant]; and Oak Ridge Associated Universities)

Oak Ridge, Anderson and Roane Counties, Tennessee

Office: Oak Ridge Operations Office

Size: 37,000 acres (57.8 square miles)

NPL Status: Placed on the NPL on November 21, 1989.

Mission: The Oak Ridge National Laboratory (ORNL) provides extensive research and development in energy production. Activities include reactor and accelerator development and operation, production and sale of radioactive and stable isotopes, and environmental and health research.

The K-25 Site (the Oak Ridge Gaseous Diffusion Plant) was a production and development facility for uranium enrichment. Production operations at the K-25 Site ceased in 1985. The present mission of the K-25 Site is environmental restoration, decommissioning, waste management, and support for other government agencies in the Work for Others program.

The Y-12 Plant's original mission was to separate the fissionable isotope of uranium-235 by the electromagnetic process. The plant today has four principal missions: to dismantle nuclear weapon components; to provide special production support to DOE programs; to support ORNL research programs; and to serve as a manufacturing, technology, and demonstration center.

(continued)

Progress in Reaching Interagency Agreement

DOE, EPA Region IV, and the State of Tennessee have negotiated an IAG for the following sites included within the Oak Ridge Reservation (ORR): ORNL, Y-12 Plant, K-25 Site, ORAU, and the Clinch River. The IAG was effective on January 1, 1992. In accordance with the IAG, the ORR is currently integrating the requirements of corrective measures under RCRA and applicable state law with response actions under CERCLA.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for environmental restoration under the IAG at the ORR total $74.6 million of appropriated funds for FY 97 and $84.5 million for FY 98 according to the request in the President's Budget.

Public Comments Regarding Interagency Agreements

The public comment period for the IAG closed on February 25, 1991. No comments were received. No new public comments regarding the IAG were received in FY 96.

Progress in Conducting Remedial Investigations/Feasibility Studies

To address contamination of the ORR as a whole, the reservation has been partitioned into 80 OUs/Work Units consisting of source control OUs and integrator OUs

Mission (continued):

The Oak Ridge Associated Universities (ORAU) is a private, not-for-profit association of 49 colleges and universities. It is a contractor to DOE, conducting research and education programs in the areas of energy, health, and the environment for DOE, ORAU's member institutions, and other private and government organizations.

Overview of Environmental Conditions: The sites include waste units that are either radioactive, hazardous, mixed (both radioactive and hazardous), or non-radioactive/non-hazardous. Examples of the concerns include radioactive underground tanks, solid waste disposal areas, liquid waste pit and trenches, hydrofracture facilities, and dense, non-aqueous phase liquid migration in fractured rock. More than 400 contaminated units exist at the reservation, and surface water and groundwater also are contaminated.

CERCLA/RCRA Remediation Funding in FY 96: $85,266,000

(such as groundwater and surface water), which can be prioritized to achieve the most effective and rapid investigation and cleanup possible. OUs are redefined and work schedules are adjusted as investigations progress and new data become available. RI/FSs are being conducted for each OU. Removal actions and interim remedial actions are conducted, where appropriate, to address threats to human health and the environment in advance of the final remedial action selection.

The remedial action work plans, site characterization studies, RI reports, and remedial design work plans have been prepared, using EPA guidelines for CERCLA RI/FSs and RCRA RFIs where appropriate. These documents were sent out in accordance with milestones specified in the negotiated IAG and the schedule defined in the RCRA permit. Public meetings were held during the year to advise the public of the restoration process being implemented to remediate the ORR and to address the public's concerns over the relative risk associated with the offsite contamination. Work completed or underway during FY 96 includes:

- ORAU - The South Campus Facility ROD was approved in December 1995. Additionally, an Action Memorandum for Freeds Bend Area was approved in October 1995.

- ORNL - Completion of the Molten Salt Reactor Experiment Deposit Removal Action Memorandum and Old Hydrofracture Tank Sludge Removal Action Memorandum.

- Y-12 Plant - Completion of the Chestnut Ridge OU 2 ROD and the Bear Creek Valley OU 2 ROD.

Progress in Conducting Remedial Actions

Final CERCLA remedial action will be initiated after RODs are signed. Removal and interim cleanup actions completed during FY 96 include:

- K-25 Site - Two Interim Actions and two decommissionings involving 50 structures were completed. The shipment of 78,000 cubic feet of pond waste raw sludge from K-25 to the private sector for treatment and disposal was completed. There were 308,230 cubic feet of stabilized pond waste from K-25 shipped for disposal. Contaminated sediment was removed from the K-25 cooling tower basin. A total of 118 infrastructure projects for the landlord were completed.

- ORNL - Grouting of four high-risk trenches was completed. The groundwater plume at Core Hole 8 was contained. Construction was completed and cold test initiated for the Gunite Tanks Treatability Study. Contaminated liquids were removed from Low Level Liquid Waste Tanks. Interim Actions

were completed on WAG 1, the Process Waste Surge Tank, and the WAG 1 Tank Content Removal. Demolition of the Waste Evaporator Facility completed this decommissioning activity.

- Y-12 Plant - Construction of the Filled Coal Ash Pond was completed. Remedial actions were performed for the Storage Area RCRA Closure and the Interim Drum Yard. The decommissioning of the Steam Coil Removal was completed as an Interim Action.

- ORR (Offsite) - Completion of the Lower East Fork Poplar Creek Phase I Remedial Action of Soils and Soil Disposal at Y-12 landfill. The City of Oak Ridge Sewage Digester content removal was completed.

In addition, in FY 96 the ORR established the Sample Management Office as part of its community relations efforts.

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PANTEX PLANT

Amarillo, Potter and Randall Counties, Texas

Office: Albuquerque Operations Office

Size: 16,000 acres (25 square miles)

NPL Status: Placed on the NPL on May 31, 1994.

Mission: The facility was originally constructed in 1942 for the U.S. Army Ordnance Corps for loading conventional ammunition shells and bombs. In 1951, the Atomic Energy Commission (DOE's predecessor) took over the main plant and surrounding 10,000 acres for use as a nuclear weapons production facility. The Pantex Plant's current functions include the fabrication of chemical high explosives; high-explosives development work in support of the design laboratories; and nuclear weapons assembly, disassembly, testing, quality assurance, repair, retirement, and disposal.

Overview of Environmental Conditions: Potential for soil and groundwater contamination from formulation and development of high explosives; machining and plating operations; weapon component tests (non-nuclear); facility and vehicle operations and maintenance activities; and historical waste management and disposal practices. High-explosive and solvent contamination may also have resulted from operations during World War II.

CERCLA/RCRA Remediation Funding in FY 96: $13,025,000

Progress in Reaching Interagency Agreement

Remediation of environmental conditions is currently being addressed under authority of a RCRA Part B Permit, issued June 6, 1991 by the Texas Natural Resources Conservation Commission (formerly the Texas Water Commission). IAG negotiations have been initiated with FY 98 projected as the completion date. EPA may be willing to use the RCRA permit instead of the IAG to regulate corrective actions at the site.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for environmental restoration at the Pantex Plant total $9.1 million of appropriated funding for FY 97 and $9.6 million for FY 98 according to the request in the President's Budget.

Public Comments Regarding Interagency Agreements

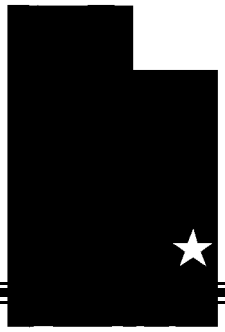
No formal public comment occurred in FY 96 concerning the IAG. Pantex Plant continued its aggressive community relations program during FY 96 by holding monthly public information meetings and participating in the monthly Pantex Plant Citizens Advisory Board. Supporting efforts include issuance of press releases for major milestones, dissemination of fact sheets and brochures, and maintenance of public reading rooms.

Progress in Conducting Remedial Investigations/Feasibility Studies

The assessment phase for four projects was completed in FY 96. Two assessments will be completed in FY 97.

Progress in Conducting Remedial Actions

A groundwater treatment system was designed, manufactured, and installed for use on the Zone 12 perched groundwater. This system was completed one year ahead of schedule at a saving of $1.5 million. In FY 96, removal actions and interim corrective measures were completed at the Ditches and Playas, the High Explosives/Radiation Sites, and the Miscellaneous Chemical Spill Sites. In FY 96, 29 SWMUs were closed as No Further Action Required, and 17 were closed as completed cleanups. In FY 97, 17 SWMUs will be closed, 17 interim corrective measures will be completed, and 3 removal actions will be completed.



MONTICELLO MILL SITE AND MONTICELLO VICINITY PROPERTIES

Monticello, San Juan County, Utah

Office: Grand Junction Office

Size: 110 acres (0.2 square mile) (Mill Site), plus approximately 425 Vicinity Properties in the town of Monticello and 27 peripheral properties.

NPL Status: Facility comprised of two individual NPL sites: the Mill Site was placed on the NPL on November 21, 1989 and the Vicinity Properties on June 10, 1986.

Mission: Former uranium milling operation.

Overview of Environmental Conditions: Soil, groundwater, and surface water contamination from radioactive mill tailings, process equipment, and milling operations. Approximately 2.6 million cubic yards of contaminated material.

CERCLA/RCRA Remediation Funding in FY 96: $32,692,000

Progress in Reaching Interagency Agreement

DOE, EPA Region VIII, and the State of Utah negotiated and signed an FFA for the Monticello Mill Site and the Vicinity Properties. This FFA, which covered both NPL sites, was executed on December 22, 1988. The March 1995 Site Management Plan establishes the overall plan for remedial actions at Monticello. Enforceable milestones are established for the submission of primary documents as defined by the FFA.

Specific Cost Estimates and Budgetary Proposals Involved in the Federal Facility Agreement

Funds budgeted for environmental restoration under the FFA at the Monticello Mill Site and Vicinity Properties total $21.2 million of appropriated funding for FY 97 and $23.4 million for FY 98 according to the request in the President's Budget.

Public Comments Regarding Federal Facility Agreement

No new public comments regarding the FFA were received in FY 96.

Progress in Conducting Remedial Investigations/Feasibility Studies

Mill Site: The RI/FS addressing mill tailings and 22 peripheral properties was completed in 1990. An additional RI/FS addressing groundwater and surface water contamination and contamination of five peripheral properties (OU 3) commenced in 1992. A Phase I RI/FS Work Plan was approved by EPA and the State of Utah, and field activities were initiated. The OU 3 baseline surface water and groundwater

sampling for the OU 3 RI was completed and a Baseline Data Summary Report prepared in February 1994. The Draft Final OU 3 RI/FS Work Plan, Field Sampling Plan, and Quality Assurance Project Plan were submitted for regulatory review in September 1995. Soil, sediment, surface water, groundwater, and biota sampling in support of the RI is expected to be completed in October 1996. Submittal of the Baseline Risk Assessment is planned for March 1997 and the Draft RI for June 1997.

Vicinity Properties: The RI/FS for the Vicinity Properties was completed in calendar year 1989.

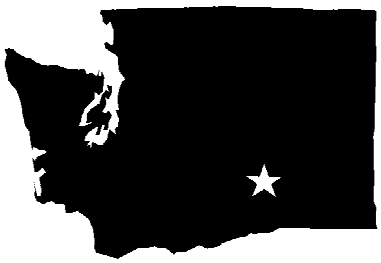
Progress in Conducting Remedial Actions

Mill Site: The ROD for OUs 1 and 2 of the Mill Site was signed by EPA in August 1990 and by DOE in September 1990; construction of site preparation facilities at OU 1 is complete. These facilities include the installation of surface water drainage control structures, including the runoff retention pond for the 78-acre site and contiguous peripheral properties. Repository excavation and liner installation at OU 1 are expected to be completed in early FY 97. Offsite drainage control ditches and the liner for Pond 3 were completed. To meet Utah discharge standards, the wastewater treatment plant was installed, tested, and operated to treat contaminated runoff. The Mill Site Remediation design, which includes the onsite repository, was completed, and the subcontract for Mill Site Remediation was awarded. Construction of Pond 4, which is used to manage leachate from the repository, was completed. The repository excavation and liner installation are expected to be completed in November 1996. Unnecessary groundwater monitoring wells were abandoned at the Mill Site and the Repository Site. The scope of the OU 3 groundwater modeling was concurred on by the regulators in November 1995. During FY 96 at OU 2, remedial action was started and completed at five properties.

Vicinity Properties: The ROD covering the Vicinity Properties was signed by EPA in September 1989 and by DOE in December 1989. Since the last Annual Report to Congress, remedial actions have been completed on 389 of the project total of 425. Fourteen Vicinity Properties were remediated in FY 96.

Enforcement Activities

DOE purchased emergency preparedness vehicles for the City of Monticello as a Supplemental Environmental Project in an attempt to resolve the dispute over fines for violations of state storm water discharge standards. In addition, DOE expects to pay $40,000 in fines to the EPA.



HANFORD SITE

Richland, Benton County, Washington

Office: Richland Operations Office

Size: 359,680 acres (562 square miles)

NPL Status: Four areas were placed on the NPL on October 4, 1989 (Areas 100, 200, 300, and 1100). Area 1100 was deleted from the NPL on September 30, 1996.

Mission: Chosen in 1943 for the Manhattan Project, the Hanford Site was used to produce plutonium for the world's first nuclear weapons. Today the focus of activities is site cleanup and environmental restoration; scientific and environmental research; development and application of radioactive waste and hazardous waste management technology; and design, construction, and operation of major energy-related test and development facilities.

Overview of Environmental Conditions: Onsite soil, groundwater, and sediment contamination by various hazardous and radioactive substances. Various levels of radionuclides are also routinely identified in the Columbia River.

CERCLA/RCRA Remediation Funding in FY 96: $105,220,000

Progress in Reaching Interagency Agreement

DOE, EPA Region X, and the State of Washington negotiated and signed the Hanford Federal Facility Agreement/Consent Order (hereafter referred to as the Tri-Party Agreement) on May 15, 1989. This Tri-Party Agreement provides the framework for effective investigation of waste sites and subsequent remediation of hazardous and mixed waste contamination at Hanford. An annual update is prepared to address additional problems and to incorporate schedules agreed to in approved RI/FS Work Plans or other work scopes agreed to by the three parties. Revision 2 of the Tri-Party Agreement was published in September 1992, which included the second and third amendments to the Consent Order.

On May 23, 1993 negotiations began on significant changes to the Tri-Party Agreement. Change for CERCLA activities included development and inclusion of milestones related to the proposed Environmental Restoration Disposal Facility, consolidation of the 300 Area OUs into a single CERCLA project, and accelerated groundwater remediation projects. The amended Tri-Party Agreement was signed on January 25, 1994.

In July 1994, the DOE, EPA Region X, and the Washington State Department of Ecology agreed to negotiate on matters related to Hanford's "Refocusing Environmental Restoration" program. The parties agreed to negotiate cleanup schedules in order to achieve earlier remediation of sites along the Columbia River, and to increase emphasis on protecting and remediating groundwater. In addition, the parties agreed to consult with affected Indian Nations and other stakeholders to seek and respond to their values and concerns. The parties concluded formal negotiations on September 30, 1994, and the amended Tri-Party

Agreement was signed on July 28, 1995 after a 45-day public comment period.

Amendment 6 was signed in February 1996. This amendment primarily addresses ways of becoming more efficient and cost-effective within the framework of the Tri-Party Agreement. The changes fall into these broad categories:

- Single Regulator Approach (eliminating support agency staffing);
- Providing unit managers and their line managers with increased responsibility and authority regarding their projects; and
- Streamlining the dispute resolution/decision-making process.

For detailed information regarding the Tri-Party Agreement, see the FY 91 CERCLA 120 Report to Congress.

Specific Cost Estimates and Budgetary Proposals Involved in Each Interagency Agreement

Funds budgeted for CERCLA activities in the environmental restoration program under the Tri-Party Agreement total $95.9 million of appropriated funding for FY 97 and $94.1 million for FY 98 according to the request in the President's Budget.

Public Comments Regarding Interagency Agreements

Amendments and updates to the Tri-Party Agreement are subject to public comment periods prior to signature by the three parties. The 5th and 6th amendments were signed by the three parties in February 1996. For detailed information regarding the Tri-Party Agreement comment process, see the FY 91 CERCLA 120 Report to Congress. All future changes to the Tri-Party Agreement will also be subject to public review and comment.

Progress in Conducting Remedial Investigations/Feasibility Studies

The Hanford Site includes a broad range of waste units that contain either radioactive, hazardous, mixed (both radioactive and hazardous), or nonradioactive/nonhazardous solid waste. Certain hazardous substances and hazardous wastes remain on and under the Hanford Site and have been detected in groundwater and surface water. An estimated 5 billion cubic yards of solid and dilute liquid waste, including hazardous substances, mixed waste, and hazardous waste and constituents, have been disposed of at the Hanford Site.

All remediation work at the Hanford Site was originally included within four NPL sites (the 100, 200, 300, and 1100 Areas), 74 source OUs containing 1,249 identified hazardous waste sites (985 past-practice sites), and 4 groundwater OUs. After cleanup was completed, the 1100 Area was deleted from the NPL in September 1996. OUs were prioritized by EPA and the State of Washington in 1989 for investigation based on an initial assessment of environmental risk.

The following activities were accomplished during FY 96:

100 Area

- A CERCLA PP was prepared for the 100 Area waste sites that were not addressed by documentation for the 100-BC-1, 100-BC-2, 100-BC-5, 100-DR-2, 100-FR-1, 100-KR-1, 100-KR-4, and 100-HR-2 OUs;

- A Focused FS Report was prepared for the 100 Area waste sites that were not addressed by documentation for the 100-BC-1, 100-BC-2, 100-BC-5, 100-DR-2, 100-FR-1, 100-KR-1, 100-KR-4, and 100-HR-2 OUs; and

- A Limited Field Investigation for the cribs in the 100-NR-1 OU was submitted.

200 Area

- One CERCLA PP was submitted for the 200-UP-2 OU;

- The Environmental Restoration Disposal Facility began operations on July 1, 1996 under a CERCLA ROD that was issued in January 1995;

- A Focused FS Report for the 200-UP-2 OU was submitted; and

- A Limited Field Investigation Report for the 200-UP-1 groundwater OU was submitted.

300 Area

- A CERCLA PP for the 300-FF-1 and 300-FF-5 OUs was submitted; and

- A CERCLA ROD for the 300-FF-1 and 300-FF-5 OUs was prepared and signed on July 17, 1996.

1100 Area

- The 1100 Area was deleted from the NPL on September 30, 1996.

Progress in Conducting Remedial Actions

Under the Hanford Site Past Practice Strategy, sites that pose a threat to human health and the environment are identified. These sites are considered for Expedited Response Actions (ERAs).

The following ERA activities were accomplished in FY 96:

100 Area

- The N-Springs ERA is located near the N-Reactor. Past liquid effluent discharges have led to strontium-90 radionuclide releases along the southern bank of the Columbia River, known as N-Springs. In August 1995 operations of a groundwater treatment system at N-Springs began.

- Excavation of the 116-C-1 trench and 116-B-4 french drain continued during FY 96.

200 Area

- The 200 West Area carbon tetrachloride treatment site (located in the 200-ZP-2 OU) vapor extraction continues. The system is now automated. Through September 1996, more than 159,000 pounds of carbon tetrachloride have been removed.

There were no ERAs done during FY 96 in either the 300 or 1100 Areas.

Other accomplishments include:

100 Area

- Excavation of contaminated soils began in FY 96.

- 15,300,000 gallons of groundwater have been pumped and treated at the 100-HR-3 OU.

200 Area

- Pump and treat is continuing as remediation in the 200-ZP-1 and 200-UP-1 OUs; 14,300,000 gallons and 28,500,000 gallons respectively have been treated through FY 96 at these OUs.

300 Area

- Remediation will begin in FY 97.

1100 Area

- Cleanup of the 1100 area was completed in FY 95. The 1100 area cleanup consisted of excavation of PCB-contaminated soil from the Horn Rapids Landfill and Ephemeral Pool and construction of a cap. More than 11 million gallons of groundwater have been treated and the past-practice disposal facility (the Environmental Restoration Disposal Facility) started operations. EPA deleted the 1100 Area from the NPL on September 30, 1996.